

## ABSTRACT OF THE DISCLOSURE

5           This invention relates to an improved process for removing trace levels of Group  
IVb contaminants from a Group IVb metal tetrahalide of and particularly to a process for  
removing zirconium tetrachloride from titanium tetrachloride. The improvement resides  
in contacting a titanium tetrachloride feedstock containing trace impurities of zirconium  
tetrachloride or hafnium tetrachloride with a sufficient amount of titanium hydride to  
10       convert any zirconium tetrachloride or hafnium tetrachloride to a lower volatile  
compound. The resultant mixture is distilled and the titanium tetrachloride separated  
from the lower volatile zirconium or hafnium compounds.

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